

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WISCONSIN**

FLASH ELECTRONICS PVT. LTD.,

Plaintiff,

v.

**ROYAL ENFIELD NORTH AMERICA
LIMITED and ROYAL ENFIELD
MOTORS LIMITED (INDIA),**

Defendants.

CASE NO. 2:19-cv-736

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Flash Electronics Pvt. Ltd. (“Flash”), by and through its attorneys, brings its Complaint against Royal Enfield North America Limited (“Royal NA”) and Royal Enfield Motors Limited (“Royal India”) (collectively, “Defendants” unless otherwise indicated) and hereby alleges as follows:

NATURE OF ACTION

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1 et seq., specifically including 35 U.S.C. § 271.

THE PARTIES

2. Plaintiff Flash is an Indian corporation with its principal place of business located at 202 Western Avenue, Sainik Farms, New Delhi, India, 110044.

3. On information and belief, Defendant Royal India is a corporation organized under the laws of India and having a principal place of business at 624 Tiruvottiyur High Road Tiruvottiyur, Chennai, Tamil Nadu, India, 600019.

4. On information and belief, Defendant Royal NA is a corporation organized under the laws of Wisconsin and having a principal place of business at 226 North Water Street, Milwaukee, WI 53202-5708 and is a subsidiary of Royal India.

5. On information and belief, Defendants Royal NA and Royal India conduct business operations throughout the United States, including in the State of Wisconsin.

SUBJECT MATTER JURISDICTION

6. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

PERSONAL JURISDICTION AND VENUE

7. This Court has personal jurisdiction over each Defendant because, *inter alia*, each Defendant has conducted and continues to conduct business in this judicial district, either directly, or through its subsidiaries, agents, and/or affiliates including, upon information and belief, by marketing, selling, offering for sale, importing, and servicing motorcycles and related products in the Eastern District of Wisconsin.

8. On information and belief, Defendant Royal India, directly or through intermediaries (including distributors, retailers, and others) designs, develops, has made by others, and makes motorcycles and related components, including products accused of infringement in this action, outside the United States that it offers to sell and sells either directly to customers in the United States, including the State of Wisconsin, or provides directly and/or indirectly to Defendant Royal NA and/or others for importation into the United States, including the State of Wisconsin.

9. On information and belief, Defendant Royal NA is a corporation organized under the laws of Wisconsin and having a principal place of business at 226 North Water Street, Milwaukee, WI 53202-5708. Furthermore, Defendant Royal NA directly, or through intermediaries (including distributors, retailers, and others) ships, distributes, offers for sale, sells, and advertises Motorcycles and related components, including products accused of infringement in this action, in the United States, the State of Wisconsin, and this District.

10. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 and 1400. Upon information and belief, Royal NA and Royal India make, use, offer to sell, sell, and/or import into this judicial district motorcycles that include components that infringe the patent asserted in this actions as well as inducing and contributing to infringement by others in and from this district. Also, as stated previously on information and belief, Royal NA has a regular and established place of business at 226 North Water Street, Milwaukee, WI 53202-5708 and is a subsidiary of Royal India.

PATENT-IN-SUIT

11. On February 20, 2018, United States Patent No. 9,899,866 (“the ’866 patent”), entitled “Regulator Rectifier Device and Method for Regulating an Output Voltage of the Same” was duly and legally issued by the United States Patent and Trademark Office (“PTO”). A true and correct copy of the ’866 patent is attached as **Exhibit A** to this Complaint.

12. By assignment, Plaintiff owns all right, title, and interest in and to the ’866 patent. Plaintiff has the right to sue and recover damages for the infringement of the ’866 patent.

FACTUAL BACKGROUND

A. Flash Makes Cutting Edge Motorcycle Components for Many of the World’s Leading Motorcycle Companies

13. Flash makes cutting-edge components that power some of the world’s most popular cars and motorcycles. Flash group products are used in Harley-Davidsons, Porsches, BMWs, Volkswagens, Audi, General Motors vehicles, Yamaha motorcycles, Kawasakis, KTM’s, Piaggios, Bajaj Autos, Triumph, Ducati, Rotax and other famous automobiles.

14. Flash has won many awards for its cutting-edge products. For example, Flash has won the Emerging India Award, GM Supplier Quality Excellence Award, and the Kaizen Gold Trophy Award. Also, in 2008, Flash became the first Indian small and medium enterprise in the automotive electrical and electronics category to be recognized by the government of India’s Ministry of Science and Technology for its research and development operations.

B. Defendants Copied Flash's Patented Regulator Rectifier Technology

15. This case is about motorcycle regulator-rectifiers. These are the small but vital components that smoothly and efficiently convert the AC (Alternating Current) voltage produced in motorcycle engines into DC (Direct Current) voltage to charge the batteries, power the headlights, light up the instrument panel, and otherwise drive the motorcycle's electrical systems.

16. In around 2014, inventors in Flash's R&D department made a breakthrough in the design of regulator-rectifiers, which led to the '866 patent.

17. Flash was researching using metal-oxide-semiconductor field-effect transistors ("MOSFETs") instead of thyristors as rectifying components in regulator/rectifiers. MOSFETs could, in theory, make a regulator-rectifier device more efficient, but this wasn't feasible at the time because it was extremely difficult to efficiently control MOSFET-based regulator-rectifiers while maintaining stable voltage and thermal efficiency. Flash solved these problems with a new latch-based control circuit that not only effectively controlled the MOSFETs, but did so while wasting less voltage and generating less unwanted heat than ever before.

18. Defendants at first sought to buy regulator-rectifiers from Flash—as Kawasaki, KTM, Bajaj Auto, Piaggio, Mahindra-Jawa and others have done. But when the parties could not agree on the price, Defendants instead, on information on belief, secretly reverse-engineered Flash's products and copied its patented technology.

19. On or about June 20, 2014, Royal India approached Flash to open negotiations to purchase regulator-rectifiers from Flash. These negotiations were covered by a non-disclosure agreement between Royal India and Flash signed on July 16, 2011.

20. As part of the negotiations, Royal India asked Flash to supply it with two regulator-rectifiers as samples to help it evaluate whether to purchase those devices from Flash.

21. Flash provided those samples to aid in Royal India's purchasing decision in good faith on or about September 1, 2014.

22. Flash understood that these samples were to be used only for the purposes of the negotiation and were to be returned when the negotiation ended.

23. In the course of the negotiation, Flash repeatedly told Royal India that it had a patent on the design of its regulator-rectifiers.

24. Flash also informed Defendants that its regulator-rectifier designs were patented on other occasions. For example, it did so in writing in December 2014. Likewise, on November 26, 2018, Flash sent Defendants a Cease-and-desist letter (attached hereto as **Exhibit C**), identifying the '866 patent and again informing Defendants' that the regulator-rectifier devices in Defendants' motorcycles infringed.

25. Returning to the negotiations between Flash and Royal India in or about 2014, these proceeded until around April 2015, but the parties were ultimately unable to agree.

26. On or about August 2015, Royal India returned one of the samples it had received from Flash.

27. But Royal India did not return the other sample. Instead, it told Flash that the sample had been lost.

28. On information and belief, Royal India instead reverse-engineered this or another sample of Flash's product.

29. On information and belief, Royal India copied (or had another supplier copy) Flash's patented regulator-rectifier design based on its reverse engineering.

30. Indeed, Defendants' regulator-rectifiers are identical in core respects to Flash's design.

31. Figure 1 shows their respective circuit diagrams side by side.

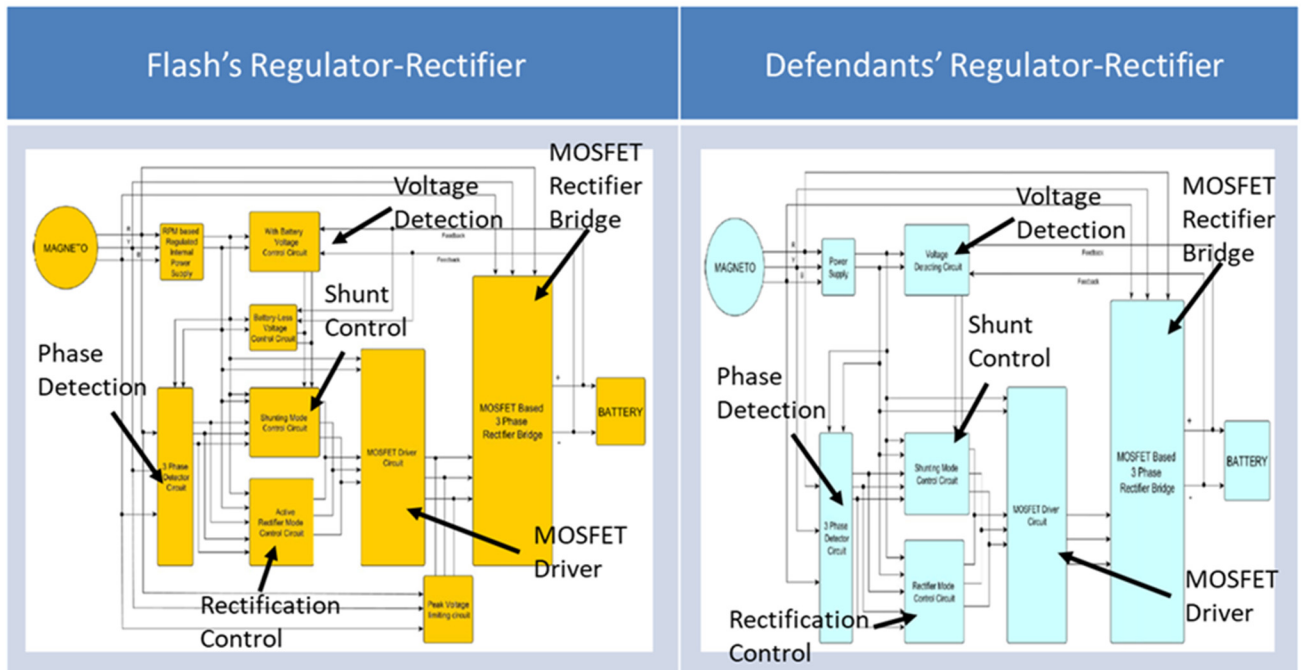


FIG. 1: Circuit Diagram

32. As Figure 1 shows, Defendants use exactly the same core components in their regulator-rectifiers as are found in the Flash products. For example, Defendants use the same voltage detection block, phase detection block, shunt block, rectification control block, MOSFET driver, and MOSFET Rectifier Bridge in essentially the same configuration as Flash's products.

33. Defendants also use these components in essentially the same way as Flash's products. For example, Defendants' devices, like Flash's: (a) feed the rectifier's output voltage back into the voltage detection block; (b) use this voltage detection block and a phase detection block to drive the shunt control and rectification circuitry; and (c) use the shunt- and rectification-control circuitry, along with the MOSFET driver block, to switch the MOSFETs of the bridge between two modes of operation—a rectification mode and a shunt mode.

34. On information and belief, Defendants' copying runs not just to the high-level circuit design, but even to the specific design and assembly choices that Flash made.

35. FIG. 2 below shows side-by-side photographs of the parties' regulator rectifier devices.

36. Fig. 2 shows, for example, that Flash assembles its device by separating the control circuit and the power circuit. Defendants do exactly the same thing.

37. Likewise, Flash assembles its device by using a printed circuit board ("PCB") with a power device as a bottom layer. Defendants again do exactly the same.

38. Similarly, Flash assembles its device by placing the control circuit on top of the power PCB circuit. Defendants have adopted this feature too.

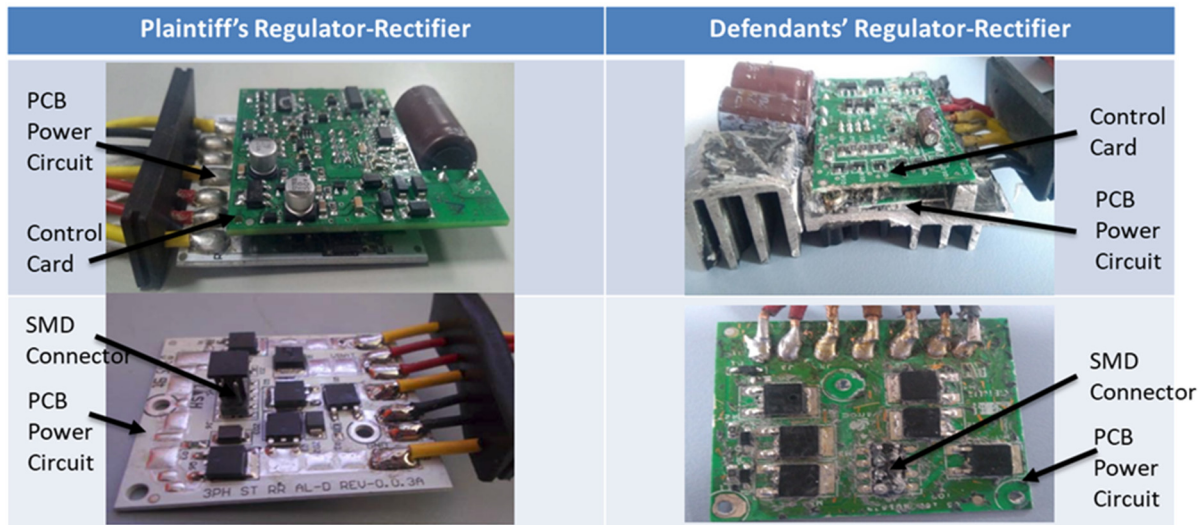


FIG. 2: Assembly of Plaintiff's Product and Defendants' Product

39. On information and belief, Defendants' manufacture, promotion, repair, servicing, use, sale and/or offer to sell in the United States, and/or importation into the United States, of its motorcycles including Plaintiff's regulator infringe, willfully infringes, contributes to infringement, and induces infringement of one or more claims of the '866 patent, directly or indirectly.

COUNT I

(Infringement of U.S. Patent No. 9,899,866)

40. Plaintiff repeats and re-alleges paragraphs 1-39 above as if fully set forth herein.

41. Defendants have infringed and continue to infringe the '866 Patent. On information and belief, Defendants infringement has been, and is, willful.

42. Defendants' infringing motorcycles include, without limitation, the following product lines: the "INT" line, the "Continental GT" line, the "Himalayan" line, and the "Classic" line.

43. Royal NA designs, develops, manufactures, has manufactured by others, uses, tests, markets, takes part in importation, sells, and offers to sell in, into, and for the United States, including in and into this judicial district, motorcycles and components thereof that infringe one or more claims of the '866 patent, either literally or under the doctrine of equivalents, including at least claims 1-29, under 35 U.S.C. §§ 271(a), (b), and/or (c). On information and belief, Royal India imports, uses, tests, markets, sells, offers to sell, and provides services and support in and into the United States, including in and into this judicial district, for motorcycles and components thereof that infringe one or more claims of the '866 patent, either literally or under the doctrine of equivalents, including at least claims 1-29 under 35 U.S.C. §§ 271(a), (b), and/or (c).

44. Royal NA has directly infringed, and continues to directly infringe, at least claims 1-29 of the '866 patent under 35 U.S.C. § 271(a) by designing, making, using, testing, marketing, taking part in importation, selling, and offering to sell motorcycles and components thereof in, into, and for the United States.

45. Royal India has directly infringed, and continues to directly infringe, at least claims 1-29 of the '866 patent under 35 U.S.C. § 271(a) by designing, importing, making, using, testing, marketing, selling, offering to sell, and providing services and support related to motorcycles and components thereof in, into, and for the United States.

46. **Exhibit B** to this Complaint is a claim chart showing one non-limiting example of Defendants' direct infringement, based on Plaintiff's current information and belief. Exhibit B is

an infringement chart showing in exemplary fashion how each limitation of Claim 1 is found in a regulator-rectifier device of the infringing motorcycles.

47. Plaintiff makes this preliminary and exemplary identification of infringing products and infringed claims without the benefit of discovery or claim construction in this action, and expressly reserves the right to amend, augment, supplement, and revise its contentions based on additional information obtained through discovery or otherwise, pursuant to the Federal Rules of Civil Procedure, to this Court's Local Rules and any applicable standing orders, and/or as is otherwise appropriate.

48. In addition, Royal NA has induced, and continues to induce, infringement of at least claims 1-29 of the '866 patent under 35 U.S.C. § 271(b) by, among other things, actively and knowingly aiding and abetting others who make, use, test, demonstrate, sell, license, offer to sell within the United States and import into the United States infringing products (including authorized dealers and repair service providers, retailers, consumers, and end users) and who directly infringe the '866 patent. Royal NA does so with the specific intent to encourage their infringement, through activities such as intentionally designing, making, selling, offering to sell, importing, marketing, advertising and promoting infringing motorcycles and components thereof, creating and distributing technical, marketing, promotional, educational, and other product literature for infringing motorcycles; and offering technical support, training, education, repair, and other services for infringing motorcycles. These activities are designed to invite, instruct, encourage, enable, and facilitate the making, use, offer for sale, and sales of the motorcycles in a manner that infringes the '866 patent. In part, Royal NA maintains and/or provides or directs content for websites, including the following webpage: <https://www.royalenfield.com/us/en/home/motorcycles/owners-manual/>, that offer technical, promotional, and support information regarding Royal NA's products accused of infringement in this case, as well as links to other Royal NA web sites with additional similar information. Furthermore, the regulator-rectifier devices in the accused products infringe by design and have reasonable purpose other than infringement.

49. Royal NA had knowledge of the '866 patent from the course of dealings between the parties, as described above, and in no event later than upon receipt of Flash's cease-and-desist letter in November 2018. Royal NA has intentionally engaged and continues to engage in its above-described inducement activities while it knows or is willfully blind to the fact that its actions would induce actual infringement of the '866 patent.

50. Royal India has induced, and continues to induce, infringement of at least claims 1-29 of the '866 patent under 35 U.S.C. § 271(b) by, among other things, actively and knowingly aiding and abetting others who make, use, test, sell, license, offer to sell within the United States and/or import into the United States infringing motorcycles (including Royal NA, authorized dealers and repair service providers, retailers, consumers, and end users) and who directly infringe the '866 patent. Royal India does so with the specific intent to encourage their infringement, through activities such as intentionally selling, offering to sell, importing, marketing, advertising and promoting infringing motorcycles and components thereof; creating and distributing technical, marketing, promotional, educational, and other product literature for infringing motorcycles; and offering technical support, training, education, repair, and other services for infringing motorcycles. These activities are designed to invite, instruct, encourage, enable, and facilitate the making, use, offer for sale, and sales of the motorcycles and components thereof in a manner that infringes the '866 patent. In part, Royal India maintains a website marked at <https://www.royalenfield.com/us/en/home/motorcycles/owners-manual/> that provides technical, promotional, and support information regarding Royal India products accused of infringement in this case, as well as links to other Royal India web sites with additional similar information. Furthermore, the regulator-rectifier devices in the accused products infringe by design and have no reasonable purpose other than infringement.

51. Royal India had knowledge of the '866 patent from the course of dealings between the parties, as described above, and in no event later than upon receipt of Flash's cease-and-desist letter in November 2018. Royal India has intentionally engaged and continues to engage in its

above-described inducement activities while it knows or is willfully blind to the fact that its actions would induce actual infringement of the '866 patent.

52. Furthermore, Royal NA has contributed to, and continues to contribute to, infringement of at least claims 1–29 of the '866 patent under 35 U.S.C. § 271(c) by others who make, use, test, license, sell, and/or offer to sell within the United States infringing and components thereof (including authorized dealers and repair service providers, retailers, consumers, and end users) and directly infringe the '866 patent.

53. Royal NA's infringing motorcycles and components thereof (e.g. their regulator-rectifier components) constitute a material part of the inventions claimed in the '866 patent, for example as shown in the infringement chart of Exhibit B.

54. Royal NA knew the infringing motorcycles and components thereof to be especially made or adapted for use in infringement of the '163 patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use. Claim 1, for example, recites a “regulator rectifier device.” The accused regulator-rectifier component is not suitable for substantial noninfringing use because, for example, the accused technology is incorporated in the very design of the infringing regulator-rectifier, is used substantially whenever that device is used in its normal and expected use, and this occurs substantially whenever the accused motorcycles are being driven.

55. Royal NA has intentionally engaged and continues to engage in its above-described contributory infringement activities while it knows or is willfully blind to the fact that its actions would contribute to actual infringement of the '866 patent.

56. Royal India has contributed to, and continues to contribute to, infringement of at least claims 1–29 of the '866 patent under 35 U.S.C. § 271(c) by others who make, use, test, license, sell, and/or offer to sell within the United States and/or import into the United States infringing motorcycles and components thereof (including Royal NA, authorized dealers and repair service providers, retailers, consumers, and end users) and directly infringe the '866 patent.

57. Royal India's motorcycles and components thereof (e.g. their regulator-rectifier components) are a material part of the inventions claimed in the '866 patent, for example as shown in the infringement chart of Exhibit B.

58. Royal India knows and has known the accused motorcycles and components thereof to be especially made or adapted for use in infringement of the '866 patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use. Claim 1, for example, recites "regulator rectifier device." The accused regulator-rectifier component is not suitable for substantial noninfringing use because, for example, the accused technology is incorporated in the very design of the infringing regulator-rectifier, is used substantially whenever that device is used in its normal and expected use, and this occurs substantially whenever the accused motorcycles are being driven.

59. Royal India has intentionally engaged and continues to engage in its above-described contributory infringement activities while it knows or is willfully blind to the fact that its actions would contribute to actual infringement of the '866 patent.

60. Based on the facts discussed previously, Royal NA and Royal India's infringement is willful.

61. Plaintiff is entitled to damages in accordance with 35 U.S.C. § 284.

62. The infringing activities, including the willful infringing activities, of each Defendant have caused and will continue to cause Plaintiff irreparable harm, for example due to the loss of Plaintiff's exclusive right to practice its patent, and because Plaintiff has no adequate remedy at law for the loss of such exclusivity, absent an injunction.

PRAYER FOR RELIEF

Plaintiff respectfully prays for the following relief:

- a) Judgment in favor of Plaintiff that each Defendant has directly infringed the '866 patent;
- b) Judgment in favor of Plaintiff that each Defendant has indirectly infringed the '866 patent;
- c) Judgment that each Defendant's infringement of the '866 patent is willful;

- d) An award of damages sufficient to compensate Plaintiff for Defendants' infringement of the '866 patent in an amount not less than a reasonable royalty;
- e) An award of all other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages found;
- f) A permanent injunction against Defendants, their directors, officers, agents, servants and employees, and those acting in privity or in concert with them, and their parents, subsidiaries, divisions, branches, affiliates, successors and assigns, from further acts of infringement, willful infringement, induced infringement, or contributory infringement of the '866 patent;
- g) A judgment in favor of Plaintiff that this case is "exceptional" under 35 U.S.C. § 285, and an award to Plaintiff of its reasonable attorneys' fees incurred in this action;
- h) An award of pre- and post-judgment interest, and the taxation of all allowable costs against Defendants;
- i) That Defendants be ordered to provide an accounting for the damages resulting from the infringement of the Patents-in-Suit, together with interest and costs, and all other damages permitted by 35 U.S.C. § 284, including an accounting for infringing sales not presented at trial and an award by the court of additional damages for any such infringing sales; and
- j) For such other and further relief as this Court shall deem appropriate.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues on which trial by jury is available under applicable law.

Dated: May 16, 2019

Respectfully submitted,

FISH & RICHARDSON P.C.

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